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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,456	04/12/2001	Jean-Michel Philippoz	AD 6802 US NA	3326

23906 7590 08/28/2002

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
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WILMINGTON, DE 19805

EXAMINER

BRUENJES, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 08/28/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	09/833,456	PHILIPPOZ ET AL.	
	Examiner	Art Unit	
	Christopher P Bruenjes	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 1, 11, and 16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "short" in claims 1, 11, 16-17, and 19 is a relative term, which renders the claim indefinite. The term

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"short" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A range of lengths needs to be given to define the term "short" in order to receive patentable weight.

The phrase "effective amount" in claim 17 is a relative phrase, which renders the claim indefinite. The phrase "effective amount" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A range of values should be given in place of an "effective amount", as stated the claim is indefinite and encompasses every plastic article.

Regarding claim 18, claims cannot be dependent of themselves. Claim 18 should read "The method of claim 17" not "18".

The term "not suitable" in claim 19 is a relative term, which renders the claim indefinite. The term "not suitable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of

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the scope of the invention. Examples of polymer compositions that are not considered suitable for blow molding should be given in the claim. Further, the claim is confusing and not enabling, because a polymer composition that is not suitable for blow molding is blow molded in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,3-7,9-14,and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gotz et al (USPN 5,468,530).

Gotz teaches a solidified hollow article (col.1, line 29) made from at least one thermoplastic composition (col. 1, lines 6-15) comprising a thermoplastic polymeric matrix and an effective amount of from 0 to 60% by weight of short aramid fibers (col. 6, lines 26-29). The thermoplastic composition matrix comprises at least one thermoplastic polymer including homopolymers, copolymers, and terpolymers of polyamides,

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poly(phenylene ethers) (abstract), polyesters, copolymers of esters and ethers (col.6, lines15-16), polyacrylates, blends of polypropylene and ethylene propylene diene (col. 4, lines 51-54), polyolefines (col. 5, lines 24-25), polystyrenes (col. 2, lines 65-67), copolymers of styrene and acrylonitrile, and copolymers of acrylonitrile butadiene styrene (col. 5, lines 51-55). Gotz also teaches that a rectangular hollow articles of the invention is produced with a length of 61 cm (col. 11, lines 24-25), and the molding materials of the invention are converted into shaped articles by blow molding (col. 10, lines 10-13). In order to blow mold an article the polymer is made into a solid preform, inserted into a mold, and then gas is blown through the preform to form a solidified hollow article.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotz et al (USPN 5,468,530).

Gotz teaches a solidified hollow article made from at least one thermoplastic composition comprising a thermoplastic polymeric matrix and short aramid fibers that is produced having a large volume (col. 10, lines 16-19) and teaches examples of hollow articles in length up to 61cm (col. 11, lines 24-25).

Gotz fails to teach an example of a hollow article with a length greater than 1m. The claimed length is a design choice and would be determined through routine experimentation by one having ordinary skill in the art and would be obvious to Gotz depending on the desired optimum length absence of showing new and unexpected results. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to

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have modified the length of the hollow article because the optimum length of the article would be optimized depending on the desired end product.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gotz et al (USPN 5,468,530) in view of Echigo et al (5,721,031) in further view of Lam (USPN 6,182,804).

Gotz teaches a solidified hollow article made from at least one thermoplastic composition comprising a thermoplastic polymeric matrix and short aramid fibers. Gotz fails to teach specifications regarding the aramid fibers.

However, Echigo teaches a fiber reinforced plastic tube that blends a thermoplastic polymeric matrix with short aramid fibers before forming in to a hollow tube. The short aramid fibers have an average diameter of 2-100 microns (col. 3, lines

21-22) and an average length 1-50mm, because if the length is too short the thermal expansion becomes insufficient so that a tube with sufficient strength is hardly obtained and if the length is too long the thermal expansion becomes insufficient and an excellent uniformity of the fibers and the matrix resin is hardly achieved (col.3, lines 12-20). Therefore, it would have been obvious to one skilled in the art at the time the applicant's invention was made to have ensured in Gotz et al

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that the diameter and length of the aramid fibers fit in the claimed ranges in order to provide sufficient strength of the article and uniformity of the fibers within the matrix, as taught by Echigo.

Also as to claim 2, Gotz and Echigo fail to teach a Canadian Standard Freeness value for the aramid fibers. However, Lam teaches that highly fibrillated aramid fibers have a Canadian Standard Freeness value of 250-525mL (col. 6, lines 14-24). Lam also teaches that the highly fibrillated aramid fibers act to hold or retain filler material (col. 6, lines 33-35). Therefore, the more fibrillated aramid fibers would help hold the polymer matrix better when blow molding. It would have been obvious to one skilled in the art to use aramid fibers with a CSF value below 500 in order to increase the hold and retaining capabilities of the aramid fibers, as taught by Lam.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use short aramid fibers having a diameter of less than 150 microns, an average length of 0.1 to 8 mm, and a Canadian Standard Freeness of less than 500mL for the aramid fibers of Gotz, in order to ensure suitable strength, uniformity of the fibers within the polymeric matrix, as taught by Echigo, and to increase the

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holding and retaining capabilities of the aramid fibers, as
taught by Lam:

Conclusion

6. The prior art made of record and not relied upon is
considered pertinent to applicant's disclosure.

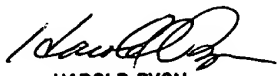
Jarrin et al (USPN 5,307,843)

Sakai et al (USPN 5,851,619)

7. Any inquiry concerning this communication or earlier
communications from the examiner should be directed to
Christopher P Bruenjes whose telephone number is 703-305-3440.
The examiner can normally be reached on Monday thru Friday from
8:00am-4:30pm.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Harold Pyon can be
reached on 703-308-4251. The fax phone numbers for the
organization where this application or proceeding is assigned
are 703-872-9310 for regular communications and 703-872-9311 for
After Final communications.

Any inquiry of a general nature or relating to the status
of this application or proceeding should be directed to the
receptionist whose telephone number is 703-308-0661.


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772 8/26/02

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Christopher P Bruenjes
Examiner
Art Unit 1772

CPB
August 26, 2002
